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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,750	10/31/2003	John A. Devos	200310702-1	3212
22879 7590 12/26/2008 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER ABDULSELAM, ABBAS I				
ART UNIT		PAPER NUMBER		
2629				
NOTIFICATION DATE		DELIVERY MODE		
12/26/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/698,750

**Applicant(s)**

DEVOS ET AL.

**Examiner**

ABBAS I. ABDULSELAM

**Art Unit**

2629

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10/30/08.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-19 is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-14 and 20-60 is/are rejected.
- 7) ☒ Claim(s) 8-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This office action is in response to a communication filed on 10/30/08. Claims 1-60 are pending,

***Response to Arguments***

2. Applicant's arguments filed on 10/30/08 have been fully considered but they are not persuasive.

Applicant argues that the cited reference, Ezumi (USPN 7197329) does not teach that “each display model comprising at least one connector”. The examiner disagrees with the applicant’s argument.

Ezumi teaches as shown in Fig. 1, a master unit 100, which includes a display section 101 and is connected to a public line via a wire communication line 130.

Ezumi also teaches a slave unit 110, which includes a display 111 and a slave unit antenna 113, and the master unit 100, which includes the display 101 and antenna 104 such that the two antennas (104, 113) are used for wireless communication between the master unit 100 and the slave unit 110 (col. 6, lines 53-61)

Hence, it is clear that the displays (101, 111) are wirelessly connected through antennas (104, 113), and of ordinary skill in the art would have ascertained the alternate wired connection between the displays (101, 111) is possible through a wired communication line 130 with communication interface (I/F) 210 (see fig. 2).

Applicant argues that Ezumi does not teach “connector to receive power from and/or provide power to an adjacent display module”. The examiner disagrees with the applicant’s argument.

As shown in the rejection below, Ezumi teaches a wire communication line 130 as shown in Fig. 1, it would be obvious for one of ordinary skill in the art that the wired communication line is plugged into a power source. One can configure the two displays (101, 111) in a desired proximity (including adjacent to one another) since Ezumi suggests that the use the displays to any other types of wireless communication apparatus (col. 11, lines 3-11). Correspondingly, it is clear that alternate use of wired type of communication is also possible.

Applicant argues that Ezumi does not teach “receptor receptive of a second adjacent display. The examiner disagrees with the applicant’s argument”.

Ezumi teaches as shown in fig. 1, the master unit antenna (104) which is used for wireless communication. As mentioned above, and of ordinary skill in the art would have ascertained the alternate wired connection between the displays (101, 111) is possible through a wired communication line 130. Note that both displays (101, 111) have to have their respective receivers by the virtue of their connectivity.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 11-14, and 51-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ezumi (USPN 7197329).

Regarding claims 1 and 51-52, Ezumi teaches a display comprising (*Fig. 1*): a plurality of display modules to form the display (*see display 111, and a display section 101 in Fig. 1*), each display module comprising: at least one user-viewable display element disposed in the

display module, each of a plurality of pixels of the display corresponding to at least one of the display elements(*Fig. 1 (101, 111), col. 6, lines 57, col. 6, line 59, display section 101 composed of a color LCD, a cordless telephone also includes a display 111*); at least one connector (130) disposed in the display module to at least one of receive power from and provide power to a first adjacent display module(*a wire communication line (130), note that it is obvious that the wired communication line is plugged into a power source*); and, at least one receptor (104) disposed in the display module and receptive to a connector of a second adjacent display module(*col. 6, lines 55-56, the master unit antenna 104 is used for wireless communication through a slave unit 110, note that as shown in Fig. 1, the master unit 100 includes a display section 101 and the slave unit 110 includes a display 111*).

*While Ezumi teaches two displays (101,111) as shown in Fig. 1,*

Ezumi does not specifically teach a plurality of display modules interlockable to form the display.

It would have been obvious to one of ordinary skill in the art to mount the two displays (101, 111) in a desired form of connection, since it has been held to be within the general skill of a worker in the art to make plural parts unitary as a matter of obvious engineering choice. In re Larson, 144 USPQ 347 (CCPA 1965); In re Lockart, 90 USPQ 214 (CCPA 1951).

Regarding claim 2, Ezumi teaches one of the plurality of display modules is a master display module and other of the plurality of display modules are slave display modules, the master display module communicating display information to each of the slave display modules

that the at least one display element of the slave display module is to display (*col. 6, lines 52-61*).

Regarding claims 3-4, Ezumi teaches the master display module determines a configuration of each slave display module relative to other of the plurality of display modules, to determine the display information to be communicated to the slave display module that the at least one display element of the slave display module is to display (*Fig. 4 (211), col. 6, lines 52-61, col. 8, lines 32-39*).

Regarding claim 5, Ezumi teaches display information is communicated to each of the plurality of display modules, each display module determining which of the display information the at least one display element of the display module is to display (*Fig. 5A (S9, S11), col. 10, lines 16-26*).

Regarding claims 6-7 and 53-57, Ezumi teaches each display module automatically self-determines a configuration of the display module relative to other of the plurality of display modules, to determine which of the display information the at least one display element of the display module is to display (*Fig. 4 (211), col. 6, lines 52-61, col. 8, lines 32-39, Fig. 5A (S9, S11), col. 10, lines 16-26*).

Regarding claims 11-14, Ezumi teaches at least one of the plurality of display modules are hot pluggable, such that the at least one display module are disconnectable from and connectable to other of the plurality of display modules while power is being provided to the

plurality of display displays (*Fig. 1 (110, 100, 130), see fig. 1 including display 111, a display section 101 and a wire communication line (130) such that a wire communication line (130), is inherently plugged into a power source).*

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 20-50 and 58-60 rejected under 35 U.S.C. 103(a) as being unpatentable over Ezumi (USPN 7197329) in view of Asano (USPN 6636181).

Regarding claims 20, 27, 38 and 58, Ezumi teaches a display comprising: a plurality of display modules interlockable to form the display(*see display 111, and a display section 101 in Fig. 1, note that interlockable feature is obvious design choice*), each display module having a front, at least one first side, and at least one second side, and comprising (*see Fig. 1 which includes a slave unit 110 and a master unit 100*): at least one display element viewable from the front of the display module, each of a plurality of pixels of the display corresponding to at least one of the display elements(*Fig. 1 (101, 111), col. 6, lines 57, col. 6, line 59, display section 101 composed of a color LCD, a cordless telephone also includes a display 111*);

*While Ezumi teaches a wire communication line (130), and discloses the master unit antenna 104 is used for wireless communication through a slave unit 110 as shown in Fig. 1,*



Ezumi does not teach *at least two connectors* mounted on the first sides of the display module to at least one of receive power from and provide power to first adjacent display modules; and, *at least two receptors* mounted on the second sides of the display module and receptive to connectors of second adjacent display modules.

*Asano (USPN 6636181) on the other hand teaches as shown in Fig. 17, an auxiliary antenna 201, which may be disposed around the antenna of a portable telephone 200 to radiate radio waves to external via an external antenna 202 coupled to the auxiliary antenna 201 via a signal cable 203.*

*Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ezumi's wireless communication apparatus (cordless telephone) shown in Fig. 1 with Asano's auxiliary antenna (201) along with an external antenna (201) with a signal cable 203 as configured in Fig. 17, because the use of an auxiliary antenna (201) with an external antenna (201) helps function a portable telephone (Cellular Phone) 200 as taught by Asano.*

Regarding claims 21 and 28, Ezumi teaches one of the plurality of display modules is a master display module and other of the plurality of display modules are slave display modules, the master display module communicating display information to each of the slave display modules that the at least one display element of the slave display module is to display (*col. 6,*

*lines 52-61).* .

Regarding claim 22, Ezumi teaches display information is communicated to each of the plurality of display modules, each display module determining which of the display information the at least one display element of the display module is to display (*Fig. 5A (S9, S11), col. 10, lines 16-26*).

Regarding claim 23, Asano teaches display information conveying information to be displayed by the at least one display element of each display module is superimposed over power signals communicated among the plurality of display modules via the at least two connectors of each display module (*Fig. 17 (200, 201, 202, 203)*).

Regarding claim 24-25, Ezumi teaches each display module further comprises a radio frequency (RF) transmitter and/or receiver to send and/or receive display information to be displayed by the at least one display element of the display module (*Fig. 1 (104, 113), col. 6, lines 52-61, col.5, lines 59-63*)

Regarding claim 26, Ezumi teaches at least one of the plurality of display modules are hot pluggable, such that the at least one display module are disconnectable from and connectable to other of the plurality of display modules while power is being provided to the plurality of display displays(*Fig. 1 (110, 100, 130), see fig. 1 including display 111, a display section 101 and a*

*wire communication line (130) such that a wire communication line (130), is inherently plugged into a power source).*

Regarding claims 29 and 32, Ezumi teaches the display module is a master display module to communicate the display information to each of other display modules of the multiple-display module display to be displayed by the other display module (*col. 6, lines 52-61*).

Regarding claims 30-31, Ezumi teaches the display module determines a configuration of each display module of the multiple-display module display (*Fig. 4 (211), col. 6, lines 52-61, col. 8, lines 32-39*).

Regarding claims 33-34, Asano teaches the display information is superimposed over power signals on the at least two connectors (*Fig. 17 (200, 201, 202, 203)*).

Regarding claim 35, Ezumi teaches the communication mechanism is one of: a radio frequency (RF) receiver and an optical receive (*Fig. 1 (113, 104)*).

Regarding claims 36 and 48-49, Ezumi teaches a control mechanism to at least automatically self-determine a configuration of the display module relative to other display modules of the multiple-display module display (*Fig. 4 (211), col. 6, lines 52-61, col. 8, lines 32-39, Fig. 5A (S9, S11), col. 10, lines 16-26*).

Regarding claim 37, Ezumi teaches the housing is rectangular in shape (*Fig. 1 (100, 110)*).

Regarding claims 39-42 and 59-60, Ezumi teaches the display information source conveys the display information to a designated display module of the plurality of display modules. (*Fig. 4 (211), col. 6, lines 52-61, col. 8, lines 32-39, Fig. 5A (S9, S11), col. 10, lines 16-26*).

Regarding claims 43-47, Asano teaches the display information is conveyed among the plurality of display modules over power signals communicated among the plurality of display modules via the at least two connectors of each display module (*Fig. 17 (200, 201, 202, 203)*).

Regarding claim 50, Ezumi teaches at least one of the plurality of display modules are hot pluggable, such that the at least one display module are disconnectable from and connectable to other of the plurality of display modules while power is being provided to the plurality of display modules (*Fig. 1 (110, 100, 130), see fig. 1 including display 111, a display section 101 and a wire communication line (130) such that a wire communication line (130), is inherently plugged into a power source*).

***Allowable Subject Matter***

6. Claims 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 15-19 are allowed.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I. Abdulsalam whose telephone number is 571-272-7685. The examiner can normally be reached on Monday through Friday from 9:00A.M.to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard

Hjerpe, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Abbas I Abdulsclam/

Primary Examiner, Art Unit 2629

December 21, 2008